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THE

NATURAL HISTORY

OF

BRITISH SHELLS,

INCLUDING

FIGURES AND DESCRIPTIONS

OF ALL THE

SPECIES HITHERTO DISCOVERED IN GREAT BRITAIN,

SYSTEMATICALLY ARRANGED

IN THE LINNEAN MANNER,

WITH

SCIENTIFIC AND GENERAL OBSERVATIONS ON EACH.

VOL. IV.

BY E. DONOVAN, F.L.S.
AUTHOR OF THE NATURAL HISTORIES OF
BRITISH BIRDS, INSECTS, &c. &c.

LONDON:
PRINTED FOR THE AUTHOR,
AND FOR
F. AND C. RIVINGTON, No 62, ST. PAUL'S CHURCH-YARD;
BY BYE AND LAW, ST. JOHN'S SQUARE, CLERKENWELL.

1802.

THE

NATURAL HISTORY

OF

BRITISH SHELLS.

PLATE CIX.

MUREX CARINATUS.

CARINATED MUREX.

GENERIC CHARACTER.

Spiral, rough. The aperture ending in a strait, and somewhat produced gutter or canaliculation.

SPECIFIC CHARACTER

AND

SYNONYMS.

Tail patulous: Shell oblong, of six spires, with two smooth spiral ridges; first spire ventricose. Aperture semi-circular.

MUREX CARINATUS: testa patulo-subcaudata oblonga: anfractibus sex lævibus bicarinatis; primo ventricoso, apertura semicirculari.

PLATE CIX.

Murex carinatus, angulated. With five or six spires, the body ventricose: the spires rising into angulated ridges. The aperture semicircular. Length near four inches. From the Portland Cabinet. *Penn. Br. Zool. T. 4. p. 123. sp. 96.*

The shell figured in the annexed Plate is unique; it formerly belonged to the late Duchess of Portland, by whose permission Mr. Pennant described it in the British Zoology. This author has given two figures of it, one in Plate 77, and the other in the Frontispiece of the fourth volume.

The existence of this species being only proved by a solitary specimen, various conjectures have arisen amongst Conchologists respecting it. Some have been inclined to admit it as an undoubted species, and others as a mere accidental variety of growth of the Linnæan Murex Antiquus. How far we may be authorized to abide by the former opinion must rest with the critical Naturalist.

To argue that it cannot be a distinct species, because only one shell of the kind has been hitherto found, is absurd; since the existence of many other species has been asserted upon the evidence of a single specimen only, and its relation to Murex antiquus is not so obvious as might be at first imagined. It certainly approaches it in the general outline, but the ridges of Murex Antiquus is most completely raised into tubercules, whereas those of Carinatus are perfectly smooth and even, nor is there that strict correspondence in the angulations of the contour in general that should induce us to consider it a variety of Murex Carinatus.

PLATE CIX.

In deciding a question of some moment to the English Conchologist, it has been thought advisable to give an additional Plate of Murex Antiquus, by which the difference between the two shells may be more easily discriminated. We must however observe, that the latter is not absolutely known as a British shell; it is a native of the North Seas, and has been supposed to inhabit some of the remote northern islands of the British dominions. The Murex Antiquus of Pennant is a very different shell, and by no means allied to that of Linnæus, whose name it bears.

It is now uncertain from what part of our coast the Duchess of Portland received this shell; Pennant is silent in this respect, but we cannot dispute that her Grace received it as a British shell, since it was inserted upon her authority in the British Zoology.

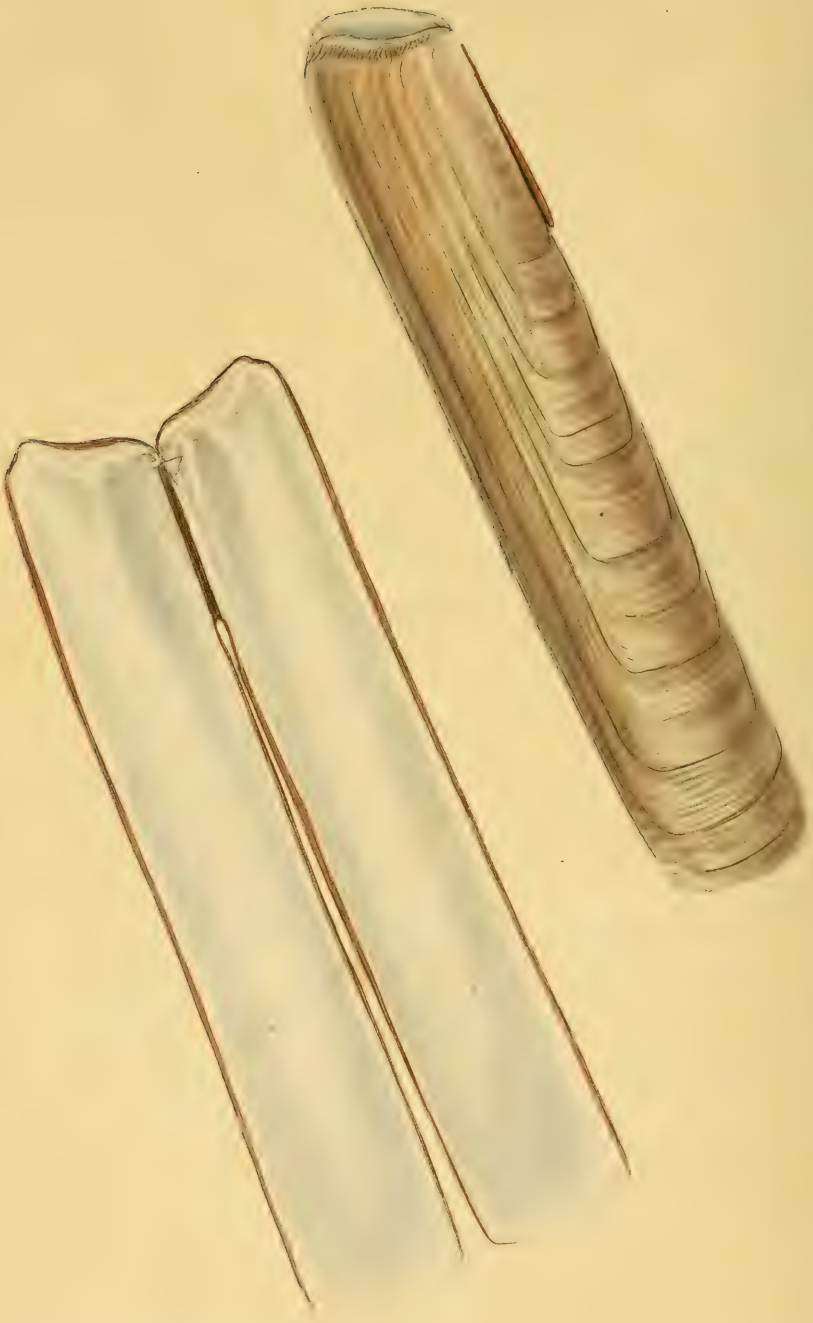


PLATE CX.

SOLEN MARGINATUS.

MARGINATED RAZOR SHELL.

GENERIC CHARACTER.

Bivalve, with equal valves, oblong, open at both ends. At the hinge a subulated tooth turned back, often double; not inserted in the opposite shell. Animal an ascidia.

SPECIFIC CHARACTER
AND
SYNONYMS.

Shell straight, of equal depth, a single tooth in each valve.

SOLEN MARGINATUS: testa lineari recta marginata, valvulis undentatis.

Solen Vagina, Sheath, *Penn. Br. Zool. p.* 83. *No.* 21.

Some Conchologists imagine that Da Costa has confounded this species with his Solen Siliqua, but it is more probable that he had never met with it, or the character of the teeth at the hinge could not have escaped his notice. In its general appearance it is not unlike Solen Siliqua, but has one end marginated, and only a single

tooth in each valve; on the contrary Solen Siliqua has two teeth in one valve, and one in the other; the single one being inserted between the two others when the shell is shut.

This is very scarce. Pennant says it inhabits Red Wharf, Anglesea, —This is not Solen Vagina of Linnæus, as Pennant describes it.

PLATE CXI.

TROCHUS TERRESTRIS.

LAND TOP SHELL.

GENERIC CHARACTER.

Animal a slug. Shell conic, aperture nearly triangular.

SPECIFIC CHARACTER.

Rather conic, whitish, with a spiral brown streak along the middle of the wreaths.

Trochus Terrestris: testa subconica albida anfractibus linea media fusca.

Trochus Terrestris, Land. *Penn. Brit. Zool. No.* 108. *tab.* 80. *fig.* 108.

Trochus Terrestris tertius. *Da Costa Br. Conch. p.* 36. *C.*

Pennant describes this new British species of Land Trochus upon the authority of Mr. Hudson, who discovered it upon the Mountains of Cumberland. Da Costa therefore places it as a distinct species, but expresses some doubt whether it may not be the same Land Trochus as Dr. Lister found in the moss at the roots of the large trees in Burwell woods, in Lincolnshire, and to which the shell found by Mr. Morton, in Morsley wood, Northamptonshire, bears great affinity. Dr. Lister's shell had six or seven wreaths, and Mr. Morton's only five. *Mort. Northampt. ch.* 7. *p.* 415.

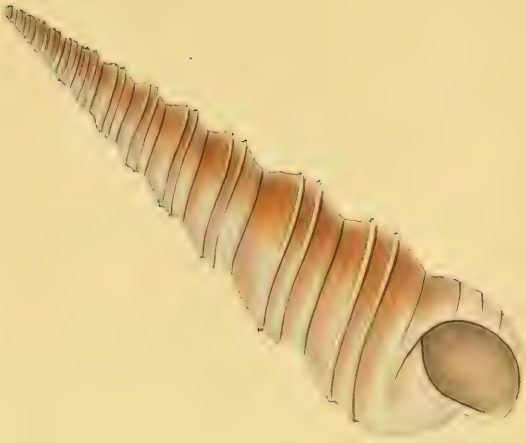


PLATE CXII.

TURBO DUPLICATUS.

TWO RIDGED SCREW SHELL.

GENERIC CHARACTER.

Animal Limax. Univalve, spiral, or of a taper form. Aperture somewhat compressed, orbicular, entire.

SPECIFIC CHARACTER
AND
SYNONYMS.

Shell slender, with two sharp prominent spiral ridges.

Turbo Duplicatus: spiræ anfractibus carinis duabus acutis. *Gmel. Linn. Syst. p.* 3607. *sp.* 79.

Buccinum crassum, duobus acutis, & inæqualiter altis striis in singulis duodecim minimum spiris donatum. An. Buccinum striatum σαλπινξ Fab. Columnæ? *List H. An. Angl. p.* 160. *tit.* 7. *tab.* 3. *fig.* 7.

Turbo duplicatus, doubled. *Penn. Br. Zool. No.* 112. *tab.* 81. *fig.* 112.

Strombiformis major rubro lutescens aut pullus: anfractibus duabus carinis sive striis acutis insignitis. Bicarinatus. s. Torcular. *Da Costa. Br. Conch. p.* 110. 44.— *Tab.* 6. *fig.* 3.

PLATE CXII.

This species is admitted as a British shell upon the authority of Dr. Lister, who says he had purchased them of the Scarborough fishermen. Dr. Lister had not seen any of them alive, and concludes it must be a pelagian shell, or one of those which live far from the shores.

As Pennant had inserted this species in his *British Zoology*, upon this authority, Da Costa was unwilling to omit it in his *British Conchology*, yet he observes, that it is not improbable Dr. Lister was imposed upon by the fishermen, for the shell is generally believed to be a native of the East-Indies; some consider it as a West-Indian, and others as an European species.

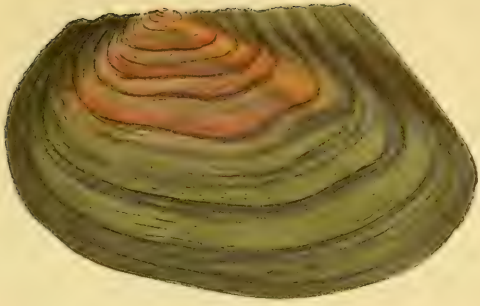


PLATE CXIII.

MYTILUS ANATINUS.

SMALL HORSE MUSCLE.

GENERIC CHARACTER.

The hinge toothless, and consists of a longitudinal furrow.

SPECIFIC CHARACTER

AND

SYNONYMS.

Shell oval, rather compressed, brittle, margin membranaceous, beaks decorticated.

Mytilus Anatinus: testa ovali compressiuscula fragilissima margine membranceo, natibus decorticatis. *Gmel. Linn. Syst. Nat. p.* 3355. *sp.* 16.

Musculus latus, testa admodum tenui, ex fusco viridescens, interdum rufescens, &c. *List. H. An. Angl. p.* 146. *tit.* 29. *tab.* 2. *fig.* 29.

Musculus tenuis minor latiusculus. *App. H. An. Angl. p.* 10. *tit.* 30. *tab.* 1. *fig.* 2.—*App. H. An. Angl. in Goed. p.* 13. *tit.* 30. *tab.* 1. *fig.* 2.

Mytuli majores à nostratibus. Horse muscles. *Merret. Pin. p.* 193.

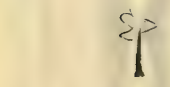
Mytilus anatinus Duck. *Penn. Br. Zool. No.* 79. *tab.* 68. *fig.* 79.

Mytilus fluviatilis minor. Anatinus, *Da Costa Br. Conch. p.* 215. *sp.* 47. *tab.* 15. *fig.* 2.

PLATE CXIII.

This species bears much resemblance to Mytilus Cygneus, but differs in being only about half the size, is more compressed and oblong, of a clearer green colour, and the cartilage side extending in a straight line to an acute angle, like a fin, and thence continuing in an oblique line towards the bottom, where it is rounded.—Extremely common in rivers and stagnant waters.

Pennant's shell is much broader in proportion than our specimens.



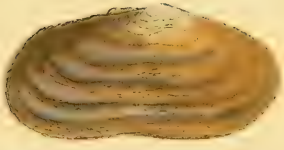


PLATE CXIV.

SOLEN ANTIQUATUS.

ANTIQUATED SOLEN, OR RAZOR SHELL.

GENERIC CHARACTER.

Bivalve, with equal valves, oblong; open at both ends. At the hinge a subulated tooth turned back, often double; not inserted in the opposite shell. Animal an Ascidia.

SPECIFIC CHARACTER

AND

SYNONYMS.

Oval oblong, semipellucid, lower margin sinuous in the middle.

Solen Chama-Solen: testa ovali-oblonga subpellucida, sinuosa. *Da Costa. Br. Conch. p.* 238. *sp.* 62.

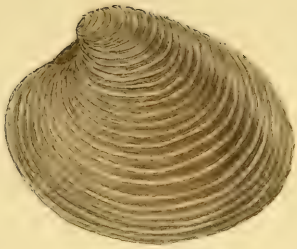
Chama angustior, ex altera parte sinuosa. *List. H. Conch. tab.* 421. *fig.* 265.

Solen Cultellus, Kidney. *Penn. Brit. Zool. No.* 25. *tab.* 46. *fig.* 25.

This is perhaps the rarest species of the Solen genus found upon the British coasts, and as Pennant observes, seems to connect the Solen with the Mya genera. It borders on the Chama of Da Costa,

who therefore calls it Solen Chama-Solen. Pennant notes it from Weymouth, and Da Costa received it from the shores of Dorsetshire and Hampshire.

Pennant has mistaken this for a very distinct shell, described by Linnæus, under the name of Solen Cultellus.



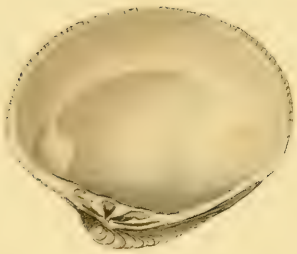


PLATE CXV.

VENUS CANCELLATA.

MEMBRANACEOUS VENUS.

GENERIC CHARACTER.

Bivalve. Hinge furnished with three teeth; two near each other, the third divergent from the beaks.

SPECIFIC CHARACTER

AND

SYNONYMS.

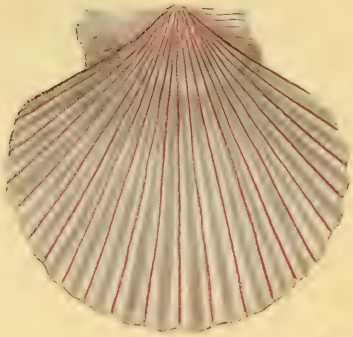
Somewhat heart shaped with remote transverse membranaceous ridges; a cordiform depression on the slope under the beaks.

VENUS CANCELLATA: testæ striis transversis membranaceis remotis, Ano cordato. *Gmel. Linn. Syst. p.* 3270. *sp.* 8.

Pectunculus strigis transversis remotis, acutis, membranaceis, donatus Membranaceous. *Da Costa Br. Conch. p.* 193. *sp.* 29. *tab.* 13. *fig.* 4. right hand.

Da Costa described this shell from a specimen in the collection of the late Dr. Fothergill. It is from the Western coast.

The shell figured by Pennant, No. 48. A. Pl. 48, as a Worn shell of Venus Erycina, is probably of this species; for it seems entirely destitute of the longitudinal undulations that decussate the transverse ridges in Venus Erycina.



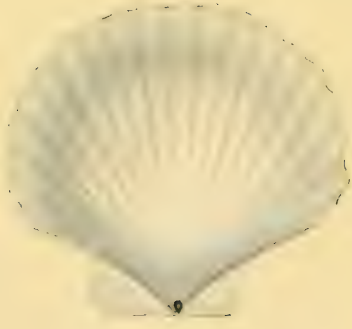


PLATE CXVI.

OSTREA LINEATA.

LINEATED SCALLOP.

GENERIC CHARACTER.

Animal a Tethys. Shell bivalve, unequal. The hinge without a tooth, having a small oval cavity.

SPECIFIC CHARACTER
AND
SYNONYMS.

Valves nearly equal, thin: one white, the other marked with a single purple line down each rib.

OSTREA LINEATA: testa subæquivalvi tenui, valva una alba, alterius singulis costis linea purpurascenti.

Pectunculus, mediocris, fere æquivalvis, tenuis, valva una alba, altera vero cum linea purpurascente in summitate unaquæque costæ. Lineatus. *Da Costa Br. Conch. p.* 147. *sp.* 4. *Tab.* 10. *fig.* 8.

This elegant shell seems to be described only by Da Costa; he says he was informed it had been fished up about Weymouth, in Dorsetshire, but had only seen it from Cornwall. We have it from the coast of Devonshire also, from which it appears an inhabitant of the western coast in general, though it is very rarely met with.

PLATE CXVII.

PHOLAS STRIATA.

STRIATED PIDDOCK.

GENERIC CHARACTER.

Animal ascidia. Shell bivalve, opening wide at each end, with several lesser valves at the hinge. The hinges folded back and connected by a cartilage.

SPECIFIC CHARACTER

AND

SYNONYMS.

Shell ovate, with numerous striæ.

PHOLAS STRIATA: testa ovata multifarium striata. *Gmel. Linn. Syst. p.* 3215. *sp.* 3.
Act. Angl. 55. *t.* 1. *f.* 1, 2, 3, 4.
Gualt. Test. t. 105. *F.*

Extremely rare as a British species, and not noticed by either Pennant or Da Costa. In the collection of the Rev. T. Rackett.

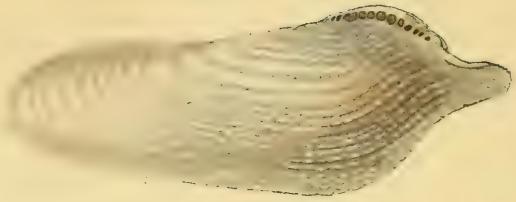


PLATE CXVIII.

PHOLAS DACTYLUS.

PRICKLY PADDOCK.

GENERIC CHARACTER.

Animal ascidia. Shell bivalve, opening wide at each end, with several lesser valves at the hinge. The hinges folded back and connected by a cartilage.

SPECIFIC CHARACTER
AND
SYNONYMS.

Shell oblong, striated transversely, and reticulated on the upper part with little spines.

PHOLAS DACTYLUS: testa oblonga hinc reticulato-striata. *Gmel. Linn. Syst. p.* 3214.

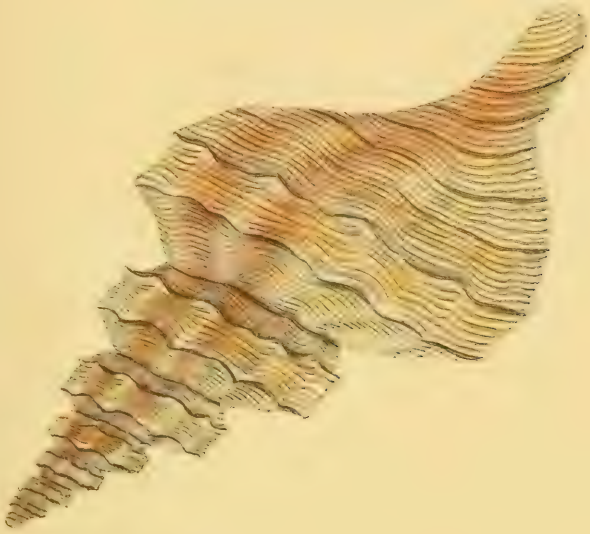
Pholas rostratus major diepensis vulgò Gallice Piteau dictus. *App. H. An. Angl. in Goed. p.* 37. *tab.* 2. *fig.* 3.—Pholas striatus, sinuatus ex altera parte. *Hist. Conch. tab.* 433. *fig.* 276.—Pholas alte striatus, ex altera parte sinuatus, eadem mucronatus, Hist. nost. Conch. Anglice Piddocks, Gallicæ Pitau; earumque piscatories pitau quieres. Exercit. *Anat.* 3. *p.* 88. *tab.* 7. *fig.* 1, 2. Pholas angustius; oblong Pierce stone or Pholade. *Petiv.*

PLATE CXVIII.

Gaz. tab. 79. *fig.* 10.—Piddocks. *Dale Harw.* p. 389. Pholas Dactylus, Dactyle. *Penn. Br. Zool. p.* 76. *sp.* 10.

Pholas angustius striatus & veluti aculeatus. Muricatus. *Da Costa Br. Conch. p.* 244. *sp.* 65. *tab.* 16. *fig.* 2, 2.

This species burrows or pierces into rocks, where it forms large cylindrical cavities. It is not uncommon on many of our coasts, and is sometimes eaten; it is in season in the Spring.



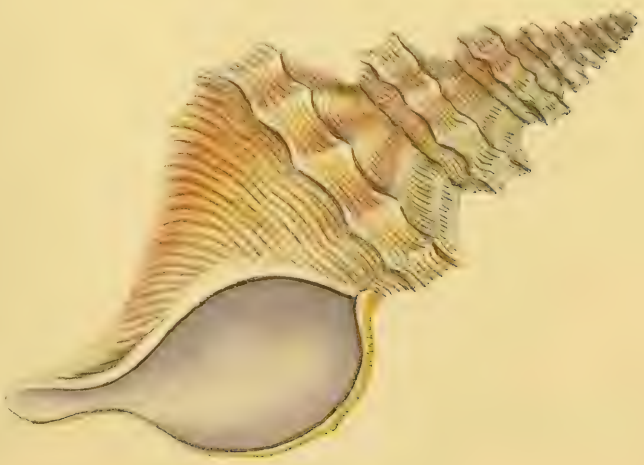


PLATE CXIX.

MUREX ANTIQUUS.

ANTIQUATED MUREX.

GENERIC CHARACTER.

Spiral, rough. The aperture ending in a strait, and somewhat produced gutter or canaliculation.

SPECIFIC CHARACTER.

Tail patulous: Shell oblong, of eight spires: spiral ridges tuberculated.

MUREX ANTIQUUS: testa patulo-caudata oblonga: anfractibus octo teretibus. *Faun. Suec.* 2165.—*Gmel. T.* 1, *fig.* 6. *p.* 3546.

In the description of Plate CIX. our reaſon for considering this and Murex Carinatus as two distinct species, are briefly stated; and the difference, it is presumed, will be farther apparent on comparing the two shells figured in that, and the annexed Plate.

Reversed shells of this species have been sometimes found. It is an inhabitant of the northern parts of Europe.

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PLATE CXX.

FIG. I.

BULLA APERTA.

OPEN BULLA OR BUBBLE.

GENERIC CHARACTER.

Shell suboval, Aperture oblong, very patulous, and smooth or even. One end convoluted.

SPECIFIC CHARACTER
AND
SYNONYMS.

Shell almoſt entirely open, subrotund, pellucid, and faintly striated transversely.

BULLA APERTA: testa subrotunda pellucida transversim substriata tota hiante. *Gmel. Linn. Syst. Nat. T.* 1. *p.* 6. *sp.* 3424. *sp.* 8.

Bulla pellucida, fragilissima, tota hians, s. apertura amplissima. *Da Costa. Brit. Conch. p.* 30. *sp.* 16.

Da Costa says, all the shells of this species he knew, were fished up near Weymouth in Dorsetshire, and not any where else on the British coast; they are even not frequent there; so that it seems a rare as well as curious shell.—To this we may add, that they are

rare only because they are local: in one part of the sandy bay of Caermarthen, below Tenby, we found them in abundance.

It is called "the Bubble" by this writer; who observes that it exactly resembles a bubble or bladder of water. The aperture is so extremely large that the whole shell lies open to view. The contour is somewhat oval, and slightly involuted; and the shell is not umbilicated.

This is certainly not Bulla patula of Pennant (Brit. Zool. No. 85. A.) as Da Costa and Gmelin imagine. The figures in that work are sometimes calculated to mislead the most attentive; but as we are in possession of the shell Pennant describes, we can venture to say the two former writers are mistaken. The species Aperta was unknown to Pennant, and the shell he figured from the Portland Cabinet, under the specific name of Patula, is extremely rare.

FIG. II.

BULLA CYLINDRICA.

NARROW BULLA.

SPECIFIC CHARACTER.

Shell cylindric, smooth, white, and thin.

BULLA CYLINDRICA: testa cylindrica lævi alba tenuissima. *Gmel. T.* 1. *p.* 6. *p.* 3433. *sp.* 38.

PLATE CXX.

This is a very scarce species on our coasts, and approaches so nearly to Bulla pallida of Da Costa (Voluta pallida. *Linn.*) described and figured in Plate LXVI. of this Work, that it may easily be confounded with it, unless the two shells be compared. Bulla Cylindrica differs in being rather more compressed, and has the pillar-lip perfectly smooth; while on the contrary the other has plaits or wrinkles upon this part as before observed: a circumstance that constitutes one character of the Voluta genus in the system of Linnæus.

In the description of the Voluta pallida we were led to think with Da Costa, that the shell figured by Pennant in the British Zoology, No. 85. A. might be of the same species. Since that time we have been favoured with the specimen figured in the annexed Plate; and as it seems to correspond more clearly with Pennant's shell than the other, there can be no impropriety in removing the reference from the former to the prefent species. Gmelin takes not the slightest notice of this figure of Pennant; so that we must remain ignorant of his opinion respecting it. And it is certain the shell before us was altogether unknown to Da Costa.

PLATE CXXI.

VENUS UNDATA.

WAVED VENUS.

GENERIC CHARACTER.

Bivalve. Hinge furnished with three teeth; two near each other, the third divergent from the beaks.

SPECIFIC CHARACTER
AND
SYNONYMS.

Shell orbiculated, convex, thin, transversely marked with very fine striæ, and waved at the margin.

VENUS UNDATA: testa orbiculata convexa tenui transversim subtilissime striata margine undata.

VENUS UNDATA, *waved.*—With thin, convex, orbiculated shells, of a white colour, tinged with yellow, and marked with thin concentric *striæ*; waved at the edges. *Penn. Brit. Zool.* 4. *sp.* 51.

There can be no doubt that the shell figured and described by Pennant in the fourth volume of his British Zoology, *No.* 51, is of

the ſame ſpecies as our shell. That author says it is the size of a hazel nut, from which it appears the ſpecimen he ſaw was a young Shell; the largest of our specimens being of the size represented in the annexed Plate.

This is *Venus lactea* of some cabinets, a name sufficiently expressive of its colour, but having been before called *Undata* by Pennant, we thought it best to retain the name he had given it.

PLATE CXXII.

MYA OVATA.

OVATE MYA.

GENERIC CHARACTER.

Animal an afcidia. Shell bivalve, gaping at one end. The hinge for the most part furnished with a thick, strong, and broad tooth, not inferted in the opposite valve.

SPECIFIC CHARACTER.

Shell oblong-ovate; posterior part roundish, and very slightly gaping; first tooth at the hinge crenulated.

MYA OVATA: testa oblongo-ovata, postice rotundata vix hiante, cardinis dente primario crenulato.

This is the Shell alluded to in the description of Plate 101, under the name of Mya ovata. The difference between it and Mya depressa, as before observed, seems to consist in the present being more ovate, and not depressed across the middle: nor is the gaping at the broadest end so considerable as in the other.

These, we have already remarked, inhabit the same waters as Mya depressa, viz. in the New River, near London, and the Froome in

Somerſetshire. It is a thick, strong and heavy Shell, of a greenish colour, and radiated.—The smallest figure in the annexed plate is a brown coloured specimen of Mya depressa.

PLATE CXXIII.

TELLINA INÆQUISTRIATA.

UNEQUALLY-STRIATED TELLEN.

GENERIC CHARACTER.

The hinge usually furnished with three teeth. Shell generally sloping on one side.

SPECIFIC CHARACTER.

Shell ovate, compressed and rather flattish, rosy, very finely striated transversely: the striæ fewer and larger at the anterior end.

TELLINA INÆQUISTRIATA: testa ovata compresso-planiuscula rosea subtilissime transversim striata: striis anterius paucioribus majoribusque.

A very rare species of Tellina communicated to Da Costa after his Conchology was published, and therefore not noticed in that work. It has been found by the late Dr. Pulteney we believe on the coast of Dorsetshire.

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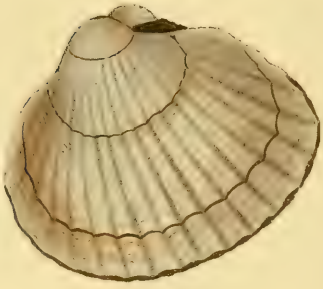

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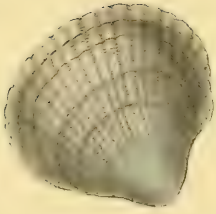

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PLATE CXXIV.

FIG. I.

CARDIUM EDULE.

COMMON COCKLE.

GENERIC CHARACTER.

Two teeth near the beak; and another remote one, on each side of the shell.

SPECIFIC CHARACTER
AND
SYNONYMS.

Shell antiquated: about twenty-six grooves, with obsolete recurved scales.

CARDIUM EDULE: testa antiquata; sulcis viginti sex obsolete recurvato imbricatis. *Linn.—Gmel. T.* 1. *p.* 6. *p.* 3252. *sp.* 20.

PECTUNCULUS VULGARIS, albidus, subrotundus, circiter viginti-sex striis majusculis at planioribus donatus. *Da Costa, Brit. Conch. p.* 180. *sp.* 19.

Cardium Edule, Edible Cockle. *Penn. Brit. Zool. No.* 41. *tab.* 50. *fig.* 41.

PLATE CXXIV.

The Common Cockle is abundant on all sandy shores: they lurk in the sand, and their hiding-place is known by a little round depressed spot upon the surface. Cockles are in season from autumn till spring: they are a wholesome and palatable food; and thoſe from Selſea, near Chichester, are esteemed the most delicious in England.

These Shells vary a little both in shape and colour: the two ſpecimens figured on the annexed Plate differ, one being more orbicular than the other. They are generally whitish, sometimes they have a blueish, and sometimes a yellowish tint.

FIG. II.

CARDIUM RUSTICUM?

SPECIFIC CHARACTER.

Shell antiquated, with about twenty remote grooves: the interſtices rugged.

CARDIUM RUSTICUM: testa antiquata: sulcis viginti remotis; interstitiis rugosis. *Gmelin, T.* 1. *p.* 6. *p.* 3252. *sp.* 23?

Notwithstanding the endless variations to which the shells of the common Cockle are liable, this appears too remote to be admitted as one of them. It passes for Cardium rusticum with some conchologiſts, and though it may not strictly agree with that specific description of Gmelin, it approaches nearer to it than to edule. That author

notices the affinity *rusticum* bears to the other species; but observes that the grooves are deeper and the ribs fewer, and more convex in rusticum: he remarks also that the latter has a ridge on the anterior margin when the valves are closed, and a narrow depressure behind the beaks, " ano evidente, sed angusto," which is not in the other. The grooves in our Shell are not so deep as " sulcis profundioribus" implies, but they are both deeper and wider than in the common sort; the ribs are rather more convex also, fewer in number, and rugged, as Gmelin describes it.—The colour exactly corresponds: he says it is sometimes ferruginous, with livid bands and sometimes white, with the anterior part fuscous: another variety of it is white, fasciated with a ferruginous yellowish or blueish colour.

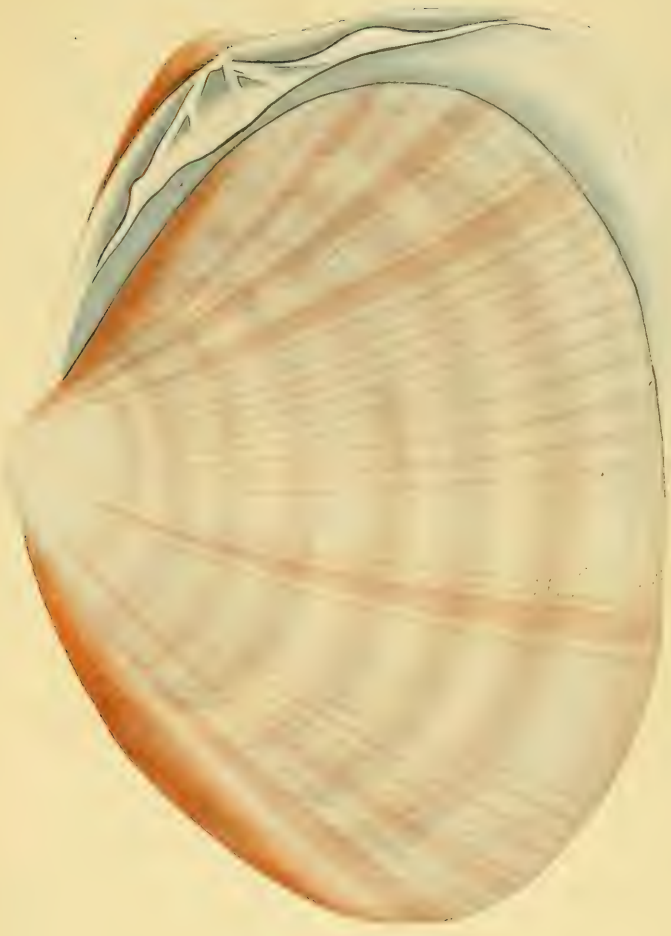

PLATE CXXV.

MACTRA GLAUCA.

GLAUCOUS MACTRA.

GENERIC CHARACTER.

Animal a Tethys, Bivalve, sides unequal. Middle tooth complicated, with a little groove on each side; lateral teeth remote.

SPECIFIC CHARACTER
AND
SYNONYMS.

Shell ovate, sordid white with brown (or glaucous) rays: very finely ſtriated transversely, and wrinkled on the anterior end.

MACTRA GLAUCA: testa ovata sordide alba glauco radiata subtilissime transversim striata anterius rugosa. *Gmel. T.* 1. *p.* 6. *p.* 3260. *ſp.* 20.

Chemn. Conch. 6. *t.* 23. *f.* 232, 233.

This is a new species as a British shell; and the conchologist is indebted to Miss Pocock for the discovery of it on our coaſt. The attention with which this lady has honoured the science has not been rewarded by this new species only: we have been favoured with several others, besides many rare kinds that have been found by

her on different parts of the sea-coast, and especially on that of Cornwall, as will appear hereafter. A few shells of the species before us were met with by her in the summer of 1801, on Hale sands under Lelant in that county, and it is said by the country people they are at times found on that coaſt in some plenty.

Though hitherto unknown as a British shell, it has been before discovered in the Mediterranean sea; for there can be no hesitation in admitting it to be the sheil figured by Chemnitz, as above quoted. Gmelin refers to the two figures in that Work, No. 232, and 233, for his species glauca; and the description corresponds in general with them, though not exactly in the colour of the rays.—Gmelin has another species of Mactra, *grandis*, which we at first suspected to be the same as our shell. It agrees precisely in the colour of the rays, but from the figure in Chemnitz's work, quoted by Gmelin for that species, these rays, it appears, are far more minute, than in our shell, and are also decussated by others in a concentric direction; —the outline of the latter is also different.

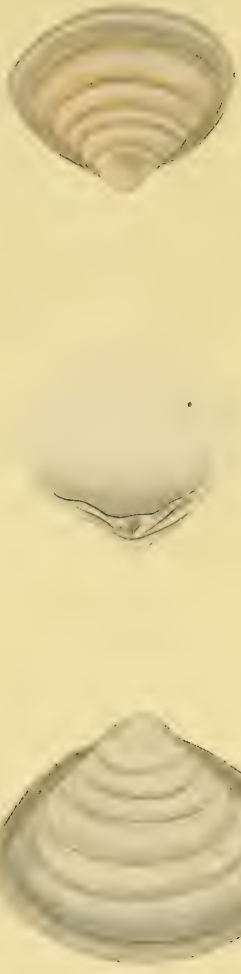

PLATE CXXVI.

MACTRA SUBTRUNCTA.

SUBTRUNCATED MACTRA.

GENERIC CHARACTER.

Animal a Tethys. Bivalve, sides unequal. Middle tooth complicated, with a little groove on each side: lateral teeth remote.

SPECIFIC CHARACTER
AND
SYNONYMS.

Shell somewhat triangular, whitish, smooth, subtruncated on each side.

MACTRA SUBTRUNCATA: testa subtriangularis, albescens, lævis lateribus subtruncatis.

Trigonella albescens lævis, lateribus subtruncatis. Subtruncata. *Da Costa. Brit. Conch. p.* 198. *No.* 34.

A thick, strong, and heavy shell, of a somewhat triangular shape, and much flattened on each side, obliquely from the beaks: the valves rather convex, the beaks pointed strong, and turned inwards.

The colour is pale or whitish, and it is externally marked with numerous fine concentric striæ.

Received from Hampshire and Devonshire; but not common. Found in a fossil state in the sand pits at Woolwich.

PLATE CXXVII.

TROCHUS PAPILLOSUS.

SHAGREENED TOP SHELL.

GENERIC CHARACTER.

Animal a slug. Shell conic. Aperture nearly triangular.

SPECIFIC CHARACTER.

Pyramidal, umbilicated, red; whorls with several rows of minute granulations.

TROCHUS PAPILLOSUS: pyramidalis umbilicatus ruber, series papillarum donatus. *Da Costa. Brit. Conch. p.* 38. *No.* 20.

Cul de lampe à flammes longitudinales, alternatives blanches et rouges, à stries granuleuses et umbilique: et cul de lampe marbré de blanc et de rouge, à stries circulaires granuleuses et tuberculeuses. *D' Avila, cab.* 1. *p.* 127, 128.

Da Costa acquaints us that he received "some few of these shells from Cornwall (in a great quantity of others, natives of that coast) by an intelligent gentleman of veracity and curiosity; but" adds that

writer, "must own I have never met with this species since on any other British coasts." We have since seen it among parcels of shells from the Mediterranean, and also find that it has been discovered by the late Dr. Pultney, on the North shore, Poole; and at Weymouth.

The specific character of the Gmelinian Trochus *Granatum*, seems to accord very nearly with our shell *, but it is about twice the size, and inhabits the Southern Ocean; and it is certainly more probable, as some conchologists have suggested, that it is the *variety* of Trochus Zizyphinus, described by Linnæus in the *Mus. Reginæ*, as being "tota pallida, anfractibus basi gibbis, striatis, subtitissime punctis papilloris." It differs from Zizyphinus in having the anfractus a little rounded, and the wreaths being encircled with granulated spiral ridges. The name Da Costa has already given it, is very applicable; and as it has undoubtedly escaped the notice of Gmelin, there can be no impropriety in retaining it.—It is evidently one of the rarest British species of the Trochus genus.

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* Testa pyramidali alba coccineo varia basi subconvexa; spiræ anfractibus convexis; cingulis granorum moniformibus, primis duobus maximis. *Gmel.* 3584. *sp.* 108.

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PLATE CXXVIII.

FIG. I. I.

MYTILUS EDULIS.

COMMON MUSCLE.

GENERIC CHARACTER.

The hinge toothless, and consists of a longitudinal furrow.

SPECIFIC CHARACTER
AND
SYNONYMS.

Shell smoothish, violet: valves slightly carinated in front, retuse behind: beaks pointed.

MYTILUS EDULIS: testa læviuscula violacea: valvis anterius subcarinatis posterius retusis, natibus acuminatis. *Fn. Seuc.* 2156. *Gmel. Linn. Syst. Nat. T. I. p.* 6. *p.* 3353. *Sp.* 11.

Mytilus vulgaris. Musculus vulgaris sublævis ex cæruleo niger. COMMON MUSCLE. *Da Costa Brit. Conch. p.* 216. *sp.* 48.

MYTILUS EDULIS, Edible. *Penn. Brit. Zool. T.* 4. *p.* 110. *sp.* 73.

PLATE CXXVIII.

Few species of the shell tribe are more generally diffused throughout the European and Indian seas than the Mytilus edulis; and few indeed exhibit such an infinite number of varieties, differing in size, in form, and colour; but which the critical Conchologist will yet perceive cannot with propriety be assigned to any other species.

On the Plate annexed to this description, one shell of the shape more uniformly prevalent is figured in its natural state, and another, which, having been divested of the epidermis, displays a beautiful variety of irregular purple stripes: an appearance very common in the uncoated shells, and in some sorts observable even when the epidermis is upon them. The upper and lower figures are of two shells, which, we are inclined to think, differ too widely from the common kind to be considered as a variety: the outline appears at the first sight obviously dissimilar; and the characters in general seem to mark most decidedly another species. They are both worn shells, but which we have compared with perfect specimens of Mytilus ungulatus, and apprehend there can be no doubt that they belong to that species.

Within the tropics, the common Muscle is known to attain a much larger size than in northern climates. They are found in immense beds, and adhere to other substances, or to one another, by means of a beard of a strong and silky texture, which the fish throws out. The Muscle affords a rich and palatable food; though they are not deemed wholesome by many people, who after eating them are sometimes afflicted with great swellings and convulsive motions, with eruptive blotches, shortness of breath, and even with delirium. These dreadful effects are usually attributed to some malignant poison in the little pea crab which is occasionally found in the Muscle, and

may be accidentally eaten with it: others think it is in consequence of swallowing the silky byssus, or beard; and again many deem the Muscle itself poisonous. It is, however, pretty generally agreed, that they affect some constitutions more than others, and that much depends on the state of the body at the time of eating them. The disorder may be cured, or at least its malignity mitigated, by administering to the affected person a spoonful of vinegar: some recommend sweet oil, or salt and water. Da Costa observes that sudorifics, vomits, oils, &c. are the usual remedies; and the Dutch give two spoon's-full of oil, and one of lemon-juice; or, in defect of that, a little more vinegar, well shaken together, and swallowed immediately.

The Muscle is the prey of many kinds of fishes, and other creatures that inhabit the sea. On the coast of Greenland, Fabricius tells us, they are so abundant, that the dogs and ravens commonly feed on them; as do also the white game, (Ptarmigan) Eider Duck, and many others.

The seed-pearls found in the shell of the Muscle was formerly in some esteem, for medicinal purposes: these, it is well known, are the effects of a disease in the fish, analogous to the stone in the human body.

Mr. Pennant informs us, that the finest Muscles on the English coasts (where they are found in great abundance) are those called Hambleton Hookers, from a village in the county of Lancashire. They are taken out of the sea, and placed in the river Wier, within reach of the tide, where they grow very fat and delicious.

PLATE CXXVIII.

FIG. II. II.

MYTILUS UNGULATUS.

CLAWED MUSCLE.

SPECIFIC CHARACTER
AND
SYNONYMS.

Shell smooth, somewhat curved: posterior margin inflected: hinge terminal, bidentated.

MYTILUS UNGULATUS: testa lævi subcurvata: margine posteriori inflexo, cardine terminali bidentato. *Linn.—Gmel. Syst. Nat. T.* I. *p.* 6. *p.* 3354. *Sp.* 12.

Several shells of this kind were picked up by Miss Pocock, on the coast of Cornwall. It was before known as an inhabitant of the Mediterranean, but not as a British species.

FIG. II. II.—Upper and lower Figures.

PLATE CXXIX.

PATELLA ALBIDA.

WHITISH CHAMBERED PAP-SHELL.

GENERIC CHARACTER.

Animal a Limax: shell univalve, sub-conic without spire.

SPECIFIC CHARACTER.

Shell fragile, entire, subrotund, whitish; vertex somewhat central, and slightly pointed; lip within lateral.

PATELLA ALBIDA: testa fragilis integerrima subrotunda albida vertice subcentrali submucronato, labio interio laterali.

This rare and nondescript species of Patella was found on the coast of Cornwall, and communicated by the lady who favoured us with Mactra glauca, and Mytilus ungulatus. It differs from any of the described British shells of this genus, in having an inner lip or chamber, such as is observed in several of the exotic kinds, belonging to the first section of the genus in Gmelin's arrangement; "Labiatæ s. labio interno instructæ, testa integra."

It is an exquisitely delicate shell, and remarkably brittle: there is a specimen of this shell in the collection of William Pilkington, Esq; Whitehall.

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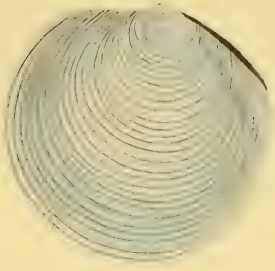

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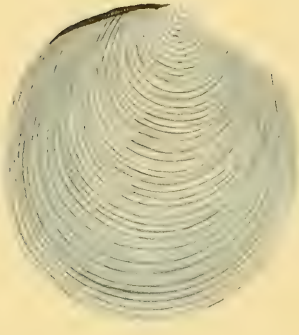


PLATE CXXX.

VENUS BOREALIS.

NORTHERN VENUS.

GENERIC CHARACTER.

Hinge furnished with three teeth; two near each other, the third divergent from the beaks.

SPECIFIC CHARACTER,

AND

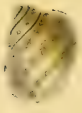
SYNONYMS.

Shell lentiform, with very remote transverse, erect, membranaceous striæ.

VENUS BOREALIS: testa lentiformi: striis transversis membranaceis erectis remotissimis. *Gmel. Linn. Syst. Nat. T.* 1. *p.* 6. *p.* 3285. *sp.* 77.

This is a scarce, or very local shell on the British coasts, and seems to agree with the description of the Linnæan Venus borealis. The species was unknown to Da Costa, and is different from that which Mr. Penant describes under the same name.

We first discovered it on the coast of South Wales; and since that time have received it from Miss Pocock, by whom it was found on the coasts of Cornwall in some plenty.



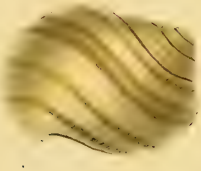


PLATE CXXXI.

HELIX HORTENSIS.

GARDEN SNAIL.

GENERIC CHARACTER.

Aperture of the mouth contracted and lunulated.

SPECIFIC CHARACTER
AND
SYNONYMS.

Shell imperforate, globose; spotted and fasciated with brown: lip white.

HELIX HORTENSIS: testa imperforata globosa: labro albo. *Müll. Zool. Dan.—Gmel. Linn. Syst. Nat. T.* I. *p.* 6. *p.* 3649. *sp.* 109.

Cochlea vulgaris fusca, maculata & fasciata. VULGARIS. *Da Costa, Brit. Conch. p.* 72. *sp.* 39.

Helix Hortensis. Garden Snail. *Penn. Brit. Zool. No.* 129. *tab.* 84. *fig.* 129.

HELIX LUCORUM. *Linn.*

The Common Garden Snail is, we think, without doubt, the Helix lucorum of Linnæus, and most other writers. Gmelin calls it hor-

tensis, and defines the specific character of lucorum to be "testa imperforata subrotunda lævi fasciata : apertura oblongo fusca." It more generally inhabits the southern parts of Europe; is larger, and whiter than hortensis; and the lip is brown.

This is a most variable species in its colours and markings, and it may still be doubted whether hortensis and lucorum be perfectly distinct. They have certainly been confounded by almost every Conchologist.

On the manners of a creature which is so generally known, as the Common Garden Snail, it is surely needless to enlarge : its mode of courtship is, however, so curiously related, that it should not entirely escape remark; and were it not attested by writers of the first authority, with the reader, we might be guilty of no small degree of scepticism, as to believing it. Each of these animals, it seems, are furnished, at a certain season, with a number of little pointed darts, which are contained within a cavity on the right side of the neck. When the Snails approach within two or three inches of each other, a scene of hostility is observed to commence: each discharging at its antagonist these darts, with considerable force, at the other; this battle continues till the reservoir be exhausted of these offensive weapons, and then a perfect reconciliation takes place between them. The eggs are about the size of peas, and perfectly round.

Snails are used with success in some consumptive cases, and an excellent cement, to fasten china, may be made of the saliva, or humours, mixed with quick lime and white of eggs, according to

Lister, &c. It feeds on all kinds of vegetables and fruits, and is consequently very destructive in orchards and gardens. Snails couple about May or June.

PLATE CXXXII.

PHOLAS CANDIDA.

WHITE PIDDOCK.

GENERIC CHARACTER.

Animal Ascidia. Shell bivalve, opening wide at each end, with several lesser valves at the hinge. The hinges folded back and connected by a cartilage.

SPECIFIC CHARACTER,

AND

SYNONYMS.

Shell oblong, muricated with striæ crossing each other.

Pholas Candida: testa oblonga undique striis decussatis muricata. *Mus. Lud. Ulr.* 469. *n.* 7.—*Gmel. Linn. Syst. Nat. T.* 1. *p.* 6. *p.* 3215. *sp.* 4.

Pholas tenuis candidus ovatus decussatim striatus. Candidus. *Da Costa. Brit. Conch. p.* 246. *sp.* 66.

Concha candida, dupliciter striata et veluti aculeata. *List. H. An. Angl. p.* 193. *tit.* 39. *tab.* 5. *fig.* 39.—Pholas alter. *App. H. An. Angl. in Goed. p.* 37. *tab.* 2. *fig.* 4 *and* 6.—Pholas parvus asper. *H. Conch. tab.* 435. *fig.* 278.

Pholas latus; short Pierce-stone or Pholade. *Petiv. Gaz. tab.* 79. *fig.* 11.

Pholas candidus. *Penn. Brit. Zool. T.* 4. *No.* 11. *tab.* 39. *fig.* 11.

PLATE CXXXII.

The Pholas candida is rather a scarce species, and differs from P. Dactylus (hians of Dr. Solander) in not being above one fourth of its size: of a more oval shape, and having both ends equally rounded; in other respects it resembles it. Da Costa seems to entertain some doubt whether it may not be really a variety in growth, than a distinct species from Dactylus. It is found on the same coasts as the latter.

PLATE CXXXIII.

SABELLA TUBIFORMIS.

STRAIGHT TUBE SABELLA, OR SAND SHELL.

GENERIC CHARACTER.

Animal a Nereis, with a ringent mouth, and two thicker tentacula behind the head. Shell tubular, and composed chiefly of sand, agglutinated to a membranaceous tube.

SPECIFIC CHARACTER
AND
SYNONYMS.

Shell solitary, simple, tube-shaped, straight; gradually tapering; and composed of brownish sand.

SABELLA TUBIFORMIS: testa solitaria simplici tubiformi recta sensim attenuata: granis arenaceis fuscis.

SABELLA GRANULATA. *Linn.* 1268 ?—*Martini*, 4. *t.* 4. 28 ?

SABELLA TUBIFORMIS. TUBE SABELLA. *Penn. Brit. Zool.* 4. *sp.* 163.

STRAIGHT SABELLA. *Pult. Hist. Dorset.*

The Sabella tubiformis of Pennant is believed by some conchologists to be the same species as Linnæus names *granulata*, but this must certainly admit of doubt: the latter, from the description, ap-

pears to be slightly incurvated, whilst Pennant's shell is perfectly straight; a difference, perhaps, sufficient to constitute two distinct species. *Martini* figures a kind of Sabella, which he considers as the S. granulata of Linnæus, and in that figure the curvature at the narrowest end is very apparent: with Martini we consider that as the true Sabella granulata of Linnæus, and not having observed the same character in any of those shells that have occurred to notice on our own coasts, have thought it most adviseable to retain the name Mr. Pennant had previously given it.

Gmelin seems to be under some doubts respecting this shell, for he entirely omits the Linnæan *granulata* among the species of this genus.—Sabella Belgica of Gmelin, which some have conjectured to be the *S. tubiformis* of Pennant, is undoubtedly different, according to *Klein* and *Martini*.

Our shell is of an elegant form and remarkably delicate: it consists of two coatings, the inner one of which is composed entirely of grains of sand, and the outer one of sand intermixed with little fragments of shells. This kind is local: it is supposed to inhabit deep waters only, and is sometimes found upon the shore after a high sea.

PLATE CXXXIV.

CHAMA COR.

HEART-SHAPED CHAMA.

GENERIC CHARACTER.

Animal a Tethys. Shell bivalve, and rather coarse. Hinge with a callous gibbosity, obliquely inserted into an oblique hollow: anterior slope closed.

SPECIFIC CHARACTER

AND

SYNONYMS.

Shell subrotund, and smooth: beaks recurved: anterior slope gaping.

CHAMA COR: testa subrotunda lævi: natibus recurvatis rima hiante. *Mus. Lud. Ulr.* 516. *n.* 88.—*Gmel. Syst. Nat. T.* 1. *p.* 6. *p.* 3299. *sp.* 1.

As an inhabitant of the Mediterranean, the Adriatic, and Caspian sea, this curious shell has been long since known; but as a British species has not been before described. It was discovered several years ago in the seas about the islands in the North of Scotland, by Mr. Agneu, Gardener to the late Duchess of Portland; and since that

time, a specimen of it was dredged up, by T. Swainson, Esq. of the Custom-house, London.

It is a delicate shell, and represented in the annexed plate of the natural size. By some it is called the Bull's-heart Cockle, but very improperly, because it cannot be considered in any manner of the Cardium genus.

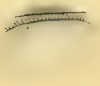


PLATE CXXXV.

ARCA LACTEA.

MILKY-WHITE ARK.

GENERIC CHARACTER.

Bivalve, valves equal. Teeth of the hinge numerous, and inserted between each other.

SPECIFIC CHARACTER

AND

SYNONYMS.

Shell somewhat rhombic, with obsolete, decussated striæ, and diaphanous.

ARCA LACTEA: testa subrhomboidea obsolete decussatim striata diaphana. *Gmel. Linn. Syst. Nat. T.* 1. *p.* 6. *p.* 3309. *sp.* 15.

ARCA LACTEA: testa subrhomboidea obsolete decussatim striata diaphana, natibus recurvis, margine crenulato. *Linn. Syst. Nat. p.* 1141. *No.* 173.

Pectunculus exiguus albus, admodum tenuiter striatas. *List. H. Conch. tab.* 235. *fig.* 69.

Mytulus Garnseiæ albus, parvus tenuiter cancellatus. *Petiv. Gaz. tab.* 73. *fig.* 1.

PLATE CXXXV.

Arca. Parva alba cancellata. Lactea. *Da Costa Brit. Conch. p.* 171. *sp.* 14.

Arca crinita. *Soland. Mus. Portland.*
Pultney. Nat. Hist. Dorsets.

There does certainly exist among conchologists a strange discordance of opinion, respecting the species of Arca before us: some believing it to be the very shell which Linnæus described under the name of *lactea*, and others maintaining the contrary. Dr. Solander, and Dr. Pultney, were persuaded that Linnæus intended a shell in some particulars not unlike this, but specifically different: the same shell in fact which Lister figures No. 67, in his Conchology. The opinions of two such respectable naturalists deserve every consideration, but however we may be disposed to abide by their authority in some instances, we cannot, for the following reasons, assent to it in the present.

Dr. Pultney premises his description by naming this species Arca crinita, a name which it appears Dr. Solander had previously given to it, in his catalogue of the Portland Museum: he observes very justly, that it is the *A. barbata* of Pennant, but not the barbata of Linnæus: refers to Da Costa's figure, Plate 11, fig. 5; and calls it in English the Hairy Ark-shell. His description is in these words, "A small oblong subrhomboidal shell: in its recent state covered with a brown epidermis. Underneath the shell is minutely striated in the longitudinal direction; commonly not much larger than a horse-bean. I found one on the North shore at Poole, more than half an inch long, and seven-eights wide. It is said to be more frequent on the shores of Guernsey island; but is very rare on

our coasts. This shell has commonly been described as the *A. lactea* of Linnæus; but that shell is much larger, and is strongly striated in a reticulated manner."

In the first place, this does not so clearly agree with the Linnæan description as might be expected. In the early editions of the *Systema Naturæ*, Linnæus expressly describes his shell as being of a subrhombic form, with obsolete decussating striæ, diaphanous, with recurved beaks, and crenulated margin; and the only alteration in the specific character to the last edition of that work, by *Gmelin*, is, that the beaks and margins are not mentioned. It hence is evident that Dr. Pultney is mistaken in the Linnæan *lactea*, when he says it is *strongly striated* in a reticulated manner; for Linnæus exactly describes it as having the reticulating striæ *obsolete*; and notwithstanding that the longitudinal striæ in the shell found on our coast are rather prominent in some specimens, they far more frequently appear altogether obsolete, and are decussated by fine transverse striæ, precisely as Linnæus mentions. There is another circumstance equally remarkable, Linnæus exactly tells us his *lactea* is the size of a horse-bean, and Dr. Pultney, after observing that his British shell *crinita* "are commonly not much larger than a horse-bean," adds, that the *lactea* of Linnæus is "much larger."

That there may have been some erroneous references among authors to the two shells figured by Lister, No. 67 and 69, of which we are not aware, is not impossible, but *Gmelin* refers to *List. Conch.* 69. *A. T. Guernsey*, for the Linnæan *lactea*, and that shell clearly corresponds both with our specimen, and the shell described by Linnæus, pectunculus exiguus albus admodum tenuiter striatis. *List.*—*Petiver* is equally satisfactory, Mytilus Garnseiæ

albus, parvus tenuiter cancellata. Da Costa is not so very clear, nor is his figure expressive, because it represents the transverse ridges too prominent. Chemnitz gives a larger specimen of it than any we have seen; and notwithstanding his references to Da Costa and others, may not be of the same species.——The shell figured by Lister, No. 67, which seems to have occasioned the confusion before alluded to, it should be observed, is described by Gmelin, in these words: testa subrhomboidea decussatim striata alba: natibus approximatis, vulva cordata, *Arca reticulata.*

Hence it is presumed the shell found on our coast ought still to be considered as the *Arca lactea* of Linnæus, and that the shell which is strongly striated in a reticulated manner, and so much larger; and has been hitherto regarded by some as that species, was never described, or even noticed by Linnæus. Nothing can be more evident than that this is the opinion of his editor Gmelin, both from his references to the figures of lactea, and by his giving a new name and character to that very shell in Lister which has been mistaken for it, and which he conceived Linnæus had omitted.

This kind is generally considered as an inhabitant of Dorsetshire, Devonshire, and Cornwall.

PLATE CXXXVI.

HELIX ARBUSTORUM.

SINGLE-STREAK SNAIL.

GENERIC CHARACTER.

Aperture of the mouth contracted and lunulated.

SPECIFIC CHARACTER.

Shell umbilicated, convex, aperture somewhat orbicular, lip reflected, with a single dark spiral band.

HELIX ARBUSTORUM: testa umbilicata convexa acuminata, apertura suborbiculari bimarginata: antice elongata. *Linn. Syst. Nat. p.* 1245. *No.* 680.

Cochlea testa utrinque convexa subcinerea: fascia solitaria grisea, labro reflexo. *Linn. Fn. Suec.* 1. *p.* 370, *No.* 1295. II *No.* 2184.

Cochlea maculata, unica fascia pulla, angustioreque, per medium anfractus, insignita. *List. H. An. Angl. p.* 119. *tit.* 4. *tab.* 2. *fig.* 4.

Cochlea subflava maculata atque unica fascia castanei coloris per medium anfractus, insignita. *Phil. Trans. No.* 105. *fig.* 4.

PLATE CXXXVI.

Cochlea subumbilicata, maculata, unica fascia angusta, per medium anfractus insignita. UNIFASCIATA, single streak, *Da Costa. Brit. Conch. p.* 75. *sp.* 40.

Helis arbustorum. *Shrub. Penn. Brit. Zool. No.* 130. *tab.* 85. *fig.* 130.

Like the two species of Helices, nemoralis and hortensis, this shell varies exceedingly in its colours and markings in different shells; but the single narrow spiral band very uniformly distinguishes it from any other. According to Lister and Petiver, it is found in shady hedges, and is frequent in rushy, moist, or marshy meadows. Da Costa says, it is also found in coppices and shrubberies; but, from his own observations, it is not a common kind: we have seen it in woods, though not often.

It may deserve remark, that this shell is generally found empty. Muller accounts for this, by acquainting us, that the animal is the prey of young Newts. Sometimes when the animal is living, the shell is of a light chesnut colour, finely marbled, mottled, or otherwise variegated, with a deep chocolate coloured brown.

PLATE CXXXVII.

OSTREA JACOBÆA.

PILGRIM OYSTER, OR SCALLOP.

GENERIC CHARACTER.

Animal a Tethys. Shell bivalve, with the valves mostly unequal and slightly eared. Hinge without teeth, but furnished with an ovate hollow, and in general lateral transverse furrows.

SPECIFIC CHARACTER

AND

SYNONYMS.

Shells with fourteen angular and longitudinally striated rays.

OSTREA JACOBÆA: testæ radiis quatuordecim angulatis longitudinaliter striatis. *Linn.—Gmel. Syst. Nat. p.* 3316. *sp.* 2.

Pecten magnus inæquivalvis operculo fubrufo, fornix vero albus costis angulatis et canaliculatis. *Jacobæus, Da Costa Brit. Conch. p.* 143. *sp.* 2.

P. JACOBÆUS Lesser. *Penn. Brit. Zool. No.* 62. *tab.* 60. *fig.* 62.

This large and handsome kind of Scallop is rare on the English coasts: in the Mediterranean it is more frequent, and from that

that circumstance, is supposed to be the same species as was formerly worn by pilgrims, who visited the holy-land. Da Costa received it from Scarborough in Yorkshire, and also from the coasts of Cornwall and Dorsetshire. Dr. Pultney remarks, that it is rare on the Dorsetshire coast, but has been fished up at Weymouth and at Poole.

The upper valve is of a reddish brown, flat, and rather depressed at the beak: the depression is generally white, and mottled, or otherwise marked with brown, or dusky red; and often with prettily disposed marks, resembling the heads of arrows. The under valve is usually white, or faintly tinged with brown, and has the rays remarkably prominent and angular; a character by which it may be easily distinguished from the Common Scallop, *Ostrea maxima*, which greatly resembles it, but in which the rays are rounded.

PLATE CXXXVIII.

VOLUTA TRIPLICATA.

THREE PLAITED VOLUTE.

GENERIC CHARACTER.

Animal Limax. Shell spiral, narrow, without a beak: columella or pillar, twisted or plaited.

SPECIFIC CHARACTER.

Shell ovate, smooth and brown: spire rather pointed: whorls six: pillar with three plaits.

VOLUTA TRIPLICATA: testa ovata lævi brunnea, spira acutiuscula: anfractibus sex, columella triplicata.

Turbo sex anfractibus apertura ovali bidentata. *Walker. Test. min. rar. fig.* 50?

This curious little Volute has not we believe been either figured or described by any Author. In its general appearance it approaches pretty nearly to the shell figured by Walker, as above quoted; but if the same, that writer has certainly described it with no very great degree of accuracy; for he speaks only of two plaits, or teeth in the

aperture, and calls it the double-toothed Turbo ; although from its plaited pillar, it is evidently a Volute : and the third plait, which with the two others, characterize the species, is obviously too large to have been overlooked. Da Costa, we are persuaded, thought they were both the same, for in a *MS. note* attached to this shell in his collection, he says, " This shell is figured by Walker," and certainly no figure in the volume of that Author corresponds with it, except that to which we refer above.

Walker speaks of his shell as being very common on the roots of rushes, in marshes, near Faversham : The *habitat* of our shell we have not been able to ascertain, having never found it in a living state.

PLATE CXXXIX.

SABELLA ALVEOLATA.

HONEY-COMB SABELLA, OR SAND SHELL.

GENERIC CHARACTER.

Animal a Nereis, with a ringent mouth, and two thicker tentaculæ behind the head. Shell tubular, and composed chiefly of sand, agglutinated to a membranaceous tube.

SPECIFIC CHARACTER
AND
SYNONYMS.

Composite, consisting of numerous parallel tubes, with somewhat funnel-shaped aperture.

SABELLA ALVEOLATA: testa composita concamerationibus numerosis: aperturis sub-infundibuliformibus.

SABELLA ALVEOLATA: testa composita concamerationibus numerosis poro communicantibus. *Gmel. Linn. Syst. Nat. T.* 1. *p.* 6. *p.* 3749. *Sp.* 3.

SABELLA ALVEOLATA, HONEY-COMB. *Penn. Brit. Zool. Vol.* 4. *p.* 147. *sp.* 162.—*Ellis Coral. p.* 90. *t.* 36.

PLATE CXXXIX.

We have constantly observed this kind of Sabella to be an inhabitant only of low rocky shores, that lie within reach of the tide at high water; and although it is composed entirely of broken shells and sea sand; and those apparently very slightly agglutinated by the animals that form and inhabit it, in its native element it acquires a considerable comparative degree of tenacity from the saline particles with which it is impregnated, and is capable of resisting the reiterated dashing of the waves without material injury.

In the more sheltered crevices of the rocks, where the animal has ample scope to expand its sandy dwelling secure from mutilation, the upper surface of a mass of these shells has a very elegant appearance; the whole being beautifully foliated with the single or bipartite funnnel-shaped lip, which each animal forms at the opening of his cell. This appearance is represented in the plate subjoined, and is a circumstance the more deserving attention, because it has entirely escaped the notice of Mr. Pennant, and perhaps of every other Naturalist, except Mr. Ellis; who in his History of Corals, figures it with a foliated surface, under the title of Tubularia arenosa anglica, from a specimen brought from Dieppe. The latter does not however agree precisely in figure with any that have occurred to our notice. Mr. Pennant evidently represents a poor mutilated fragment, in which the openings of the cells are shewn like so many rounded perforations, in a somewhat uneven surface, and is just as it appears in masses on the sea-beach, that have been trodden under-foot; or pieces that have been much worn, and thrown loose upon the shore.

These shells are three or four inches in length, and where they are found are generally abundant, but they seem to be very local. Mr. Pennant says it is found on the Western coasts of Anglesea, near Cric-

ceth in Caernarvonshire, and near Yarmouth. We have seen it on other parts of the sea coast of North Wales, and in equal plenty on those of South Wales likewise. On the coast of Dorsetshire, according to Dr. Pultney, fragments are found very frequently, but none very perfect. In the History of that County the following account is given of it.—"GREGARIOUS SABELLA. This is composed of a mass of fine sand, and particles of broken and finely comminuted shells, aggregated by vermiform animals of the Nereis genus, each lodged in its separate tube close to, but not interfering with each other. All the tubes end in orifices on the upper or the same surface. I but once saw a mass of this kind, about the size of a large apple, on the beach, a mile east of Weymouth; but I suspect it is not very uncommon, as fragments are very frequent."

PLATE CXL.

MACTRA HIANS.

GAPING, OR OBLONG MACTRA.

GENERIC CHARACTER.

Animal a Tethys. Shell bivalve: valves equal; sides unequal: middle tooth of the hinge complicated, with a small hollow: lateral teeth remote and inserted into each other.

SPECIFIC CHARACTER.

Shell oblong, rather arcuated, coarse, gaping anteriorly, and the hinge placed very far back.

MACTRA HIANS: testa oblonga sub-arcuata rudi anticè hiante, cardine subterminali.

MACTRA HIANS. *Soland. Mus. Port.*

Da Costa and some other Conchologists have very erroneously been led to conclude, that this, and Mactra lutraria, are the same species, although they differ in almost every particular. The present shell is much wider in proportion to the length than *M. lutraria*; and of a more incurvated shape: it is also a thicker and coarser shell; and has the hinge placed much further back than in the other species. Dr. Solander, who described it in the catalogue of the Portland Museum, gave it the specific name of hians, from its re-

markable gaping at the anterior end, and a name so applicable we thought it best to retain.

The cicatrix of the animal, in this kind, is different from that of M. lutraria, a circumstance that has not escaped the observation of Dr. Pultney. This author tells us, the Mactra hians is thrown up in considerable quantities on all the smooth beaches he has seen on the coast of Dorsetshire, particularly on the North shore at Poole, opposite Brankseä isle; and that he has also seen it on the beaches at Studland, Swanage, and Weymouth. We have observed it, but not in abundance, on other sea-coasts.

PLATE CXLI.

MYTILUS RUGOSUS.

RUGGED MUSCLE.

GENERIC CHARACTER.

The hinge toothless, and consists of a longitudinal furrow.

SPECIFIC CHARACTER
AND
SYNONYMS.

Shell rhombic oval, rugged, obtuse at the ends and antiquated.

MYTILUS RUGOSUS: testa rhomboideo-ovali rugosa obtusa antiquata. *Linn. Syst. Nat. p.* 1156. *No.* 249.

Pholas noster, sive concha intra lapidem quendam cretaceum degens. *List. H. An. Angl. p.* 1722. *tit.* 21. *tab.* 4. *fig.* 21.

Mytilus parvus rhomboidea-ovalis, subalbescens, rugosus. *Rugosus*, Rugged, *Da Costa Brit. Conch. p.* 223. *sp.* 52.

The Mytilus rugosus is rather a rare species on our coasts. Lister notes it from Hartlepool in Durham, and Da Costa says on the coast of Yorkshire, about Scarborough, Whitby, &c. It is found in incredible abundance, niched or burrowed, in the rocks of lime-stone, &c.

In habit and manners of life this species greatly resembles the Pholades, each forming for itself a separate apartment within the hard clay, or solid stone: this it pierces when young, and afterwards continues to enlarge the cell as it increases in bulk, without widening the aperture; so that when full grown, the shell cannot easily be taken whole out of the cell, without breaking the stone in which it is contained.

This shell may perhaps be arranged with equal propriety with the *Myæ* as the *Mytili*, notwithstanding that it is admitted among the latter by most collectors.

PLATE CXLII.

MYA GLYCYMERIS.

LARGE MYA.

GENERIC CHARACTER.

Animal Ascidia. Shell bivalve, gaping in general at one extremity: hinge with a thick patulous tooth; seldom more than one, and that not inserted into the opposite valve.

SPECIFIC CHARACTER AND SYNONYMS.

Shell gaping at both ends: very thick, lamellous oblong-oval, with transverse rugose striæ: first tooth of the hinge very thick.

Mya Glycymeris: testa utrinque hiante crassissima lamellata oblongo ovata transverse striato rugosa, cardinis dente primario crassissimo. *Gmel. Syst. Nat. p.* 3222. *sp.* 17.

Mya Glycymeris: testa sub-ovata oblonga, ponderosa, ventricosa, utrinque hians, antice et postice quasi oblique truncata, dente cardinali crassissimo. *Chemn. T.* 6. *p.* 33.

Telline beante, *Favart D'Herbigny. Dict. T.* 3. *p.* 358.

List. n. Conch. 6. *t.* 3. *f.* 25. *Born. t.* 1. *f.* 8.

PLATE CXLII.

A species of Mya admitted with some doubt as a British shell: it is a kind acknowledged however as such, by collectors of English Natural History in general; and is said to have been undoubtedly fished up in the deep waters between the Dogger-Bank and the eastern coast of England.

The Mya Glycymeris is the largest of its genus, and is an inhabitant of most parts of the European sea. In the Mediterranean, and on the northern coasts of Spain, it is not uncommon: on the coast of France it is also found sometimes.

PLATE CXLIII.

BULLA PATULA.

PATULOUS BULLA.

GENERIC CHARACTER.

Animal Limax. Shell rather convoluted at one end, suboval: aperture oblong.

SPECIFIC CHARACTER
AND
SYNONYMS.

Shell ovate, smooth, and somewhat beaked at both ends; that at the base produced and sub-umbilicated: lip entire.

BULLA PATULA: testa ovata lævi sub-birostri: basi productiori sub-umbilicata, labro integro.

BULLA PATULA. Open. B. with one one end much produced and fuciform. The aperture very patulous. *Penn. Brit. Zool. V.* 4. *p.* 117. *sp.* 85.

Pennant seems to be the only author who has noticed this species. Da Costa imagined, from the description given by that author, that it was of the same kind as that which he inserted in his British

Conchology, under the name of Bulla, the Bubble (Aperta, Linn.) and refers to the figure in the work of Pennant accordingly; but in this instance he was much mistaken, for the two shells are perfectly distinct; and it appears certain, that the shell described by Da Costa was as much unknown to Pennant, as that of Pennant was to Da Costa. The shell of the latter is figured in Plate 120 of this work, and the true Bulla patula of the other is figured in the Plate annexed.

This we apprehend to be one of the rarest of the British shells hitherto discovered; Pennant notes it from Weymouth, and refers for his specimen to the Portland Cabinet: our shell is from Weymouth likewise.

PLATE CXLIV.

NERITA NITIDA.

GLOSSY NERIT.

GENERIC CHARACTER.

Animal Limax. Shell univalve, spiral, gibbous, and rather flat beneath: aperture semi-orbicular, or semi-lunar: pillar lip transverse truncated and flattish.

SPECIFIC CHARACTER.

Shell smooth, white, and glossy: spire rather pointed: umbilicus half closed.

NERITA NITIDA testa lævi nivea nitida: spira sub-mucronata umbilico semi-clauso.

Among the reserved shells intended by Da Costa for a second edition of his Conchology, we find two specimens of this species of Nerita, with a *MS.* memorandum, importing that he had received one of them from Mr. Church, and that the other was in his possession before. On this vague authority, we did not think it incumbent to insert the shell in the present Work, especially since its habitat was

not mentioned; but the same kind was discovered, in the course of last summer, upon the coast of Scotland, near Caithness, by A. Macleay, Esq. and we can no longer hesitate to insert it as an undoubted British species.

In the annexed plate it is represented of the natural size. It is a remarkable little shell, and is not to the best of our knowledge, mentioned in the work of any author.

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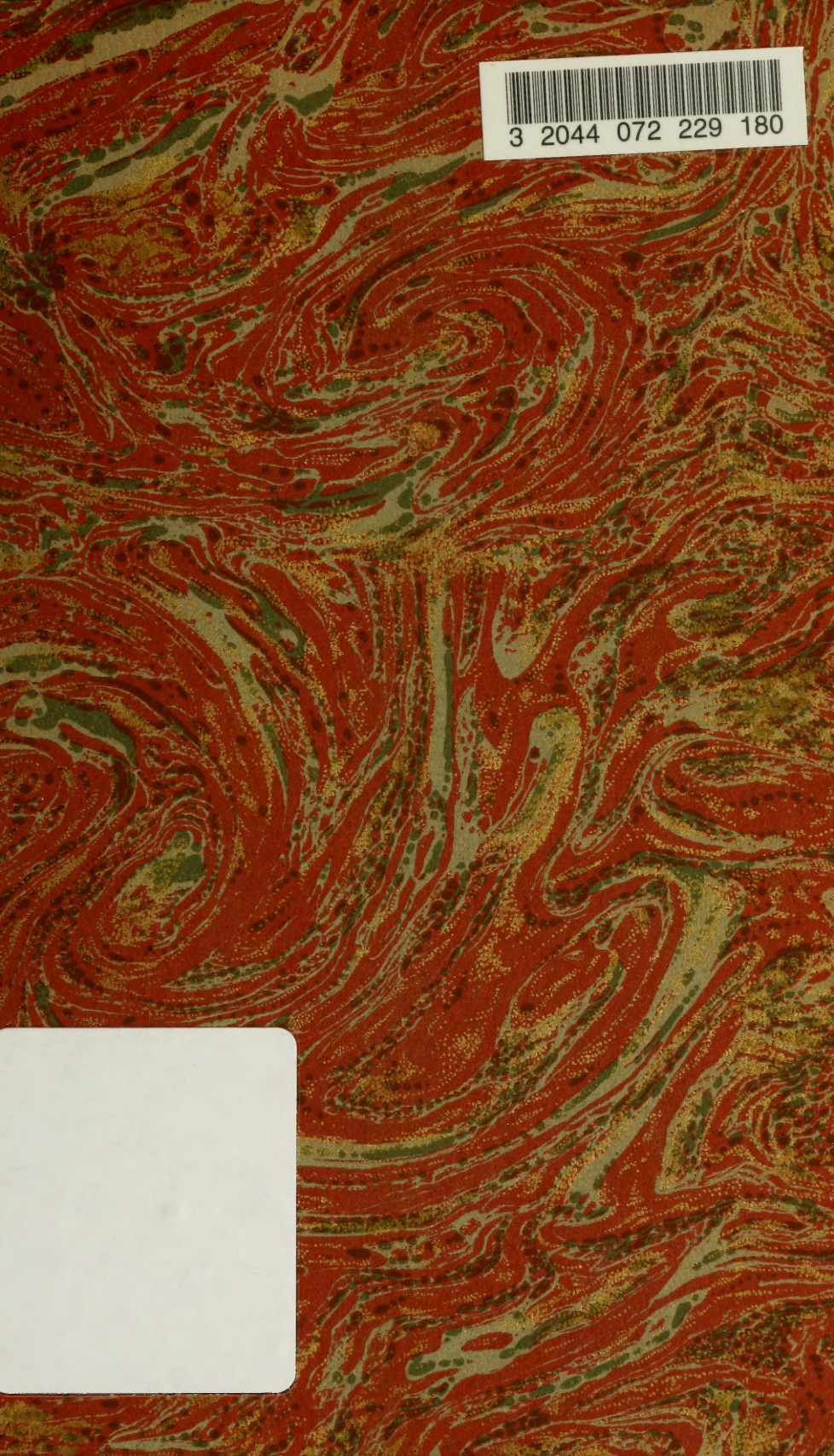
Printed by Bye and Law, St. John's Square, Clerkenwell.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